

FIG. 1

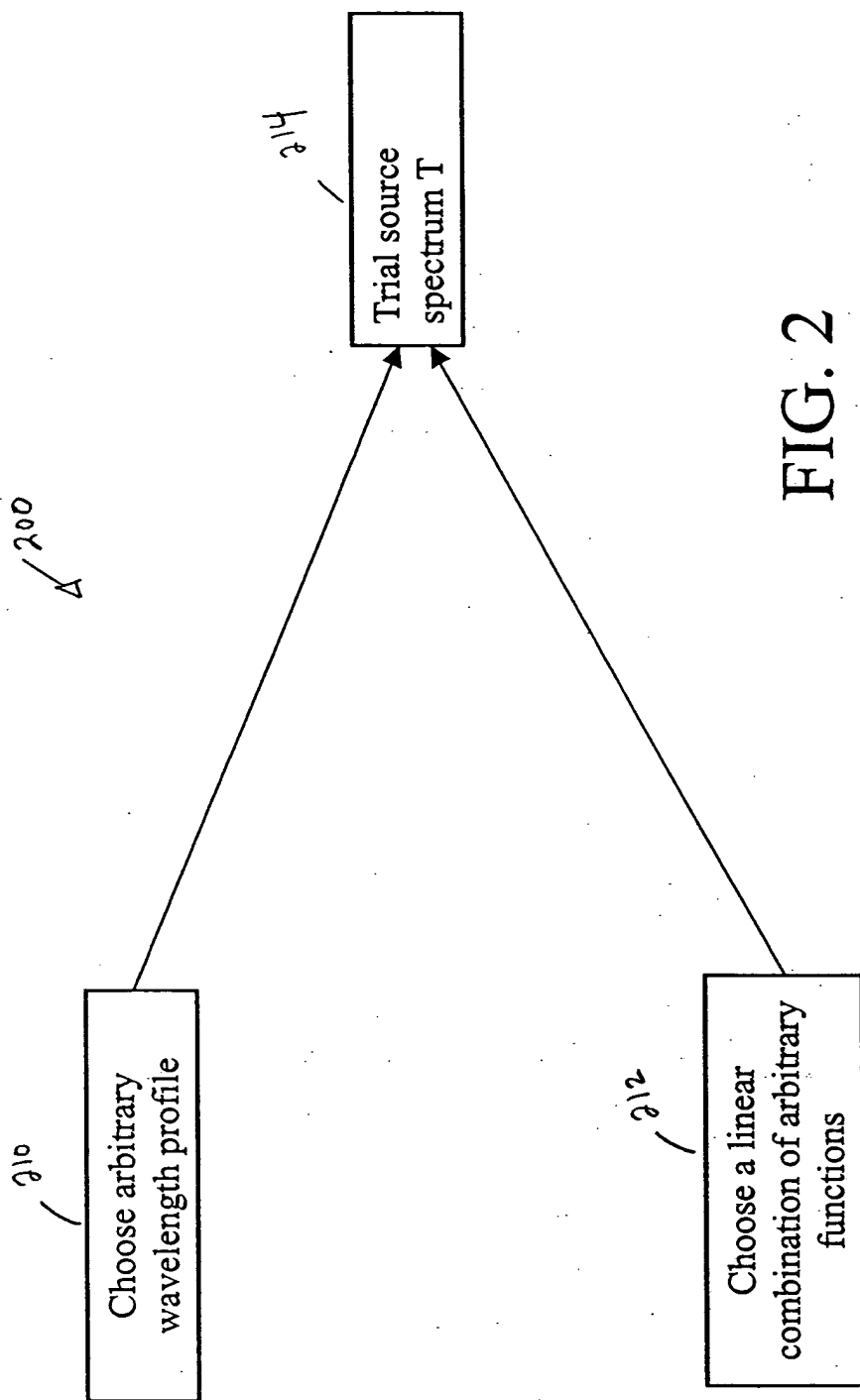


FIG. 2

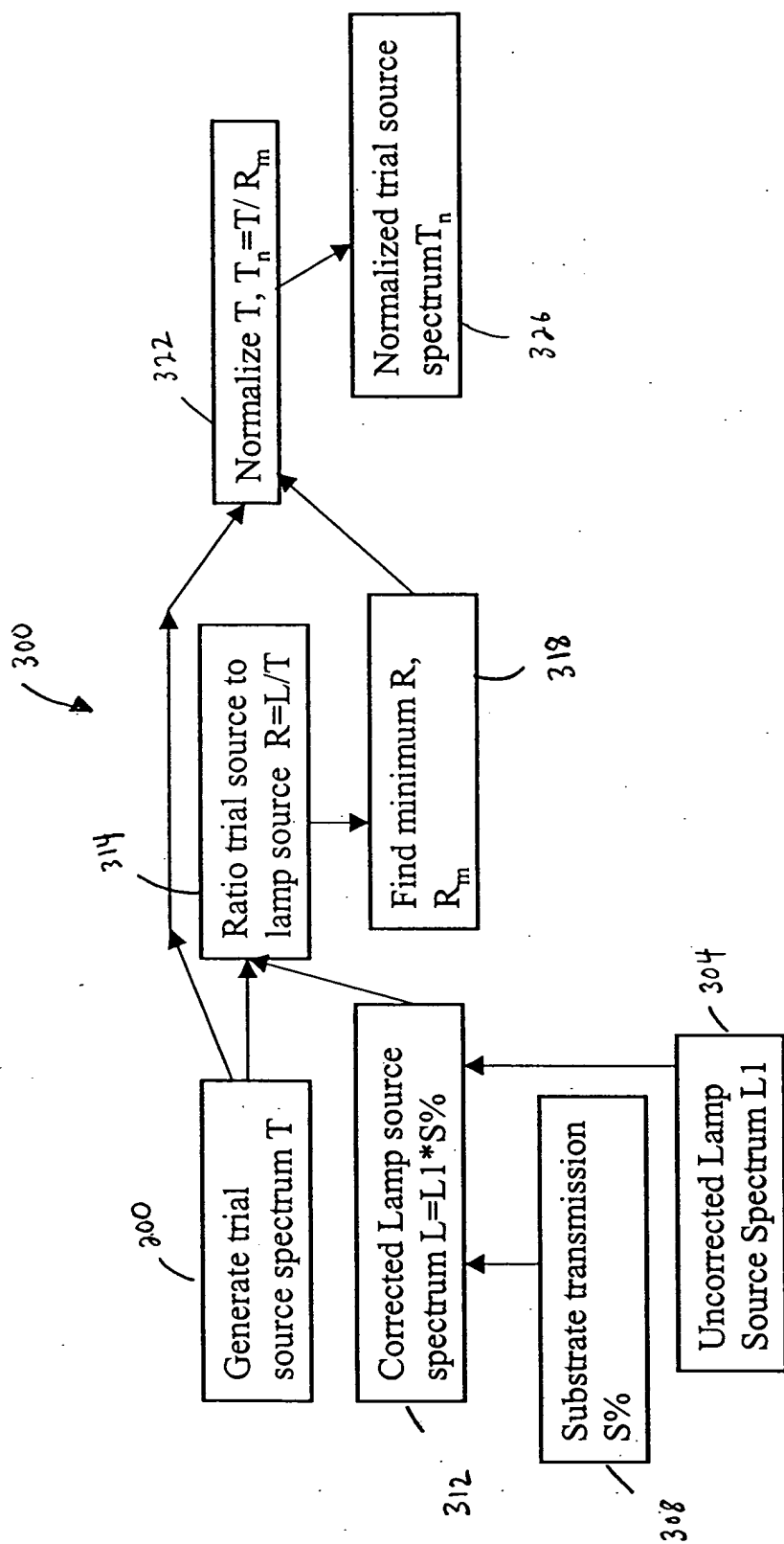


FIG. 3

FIG. 4

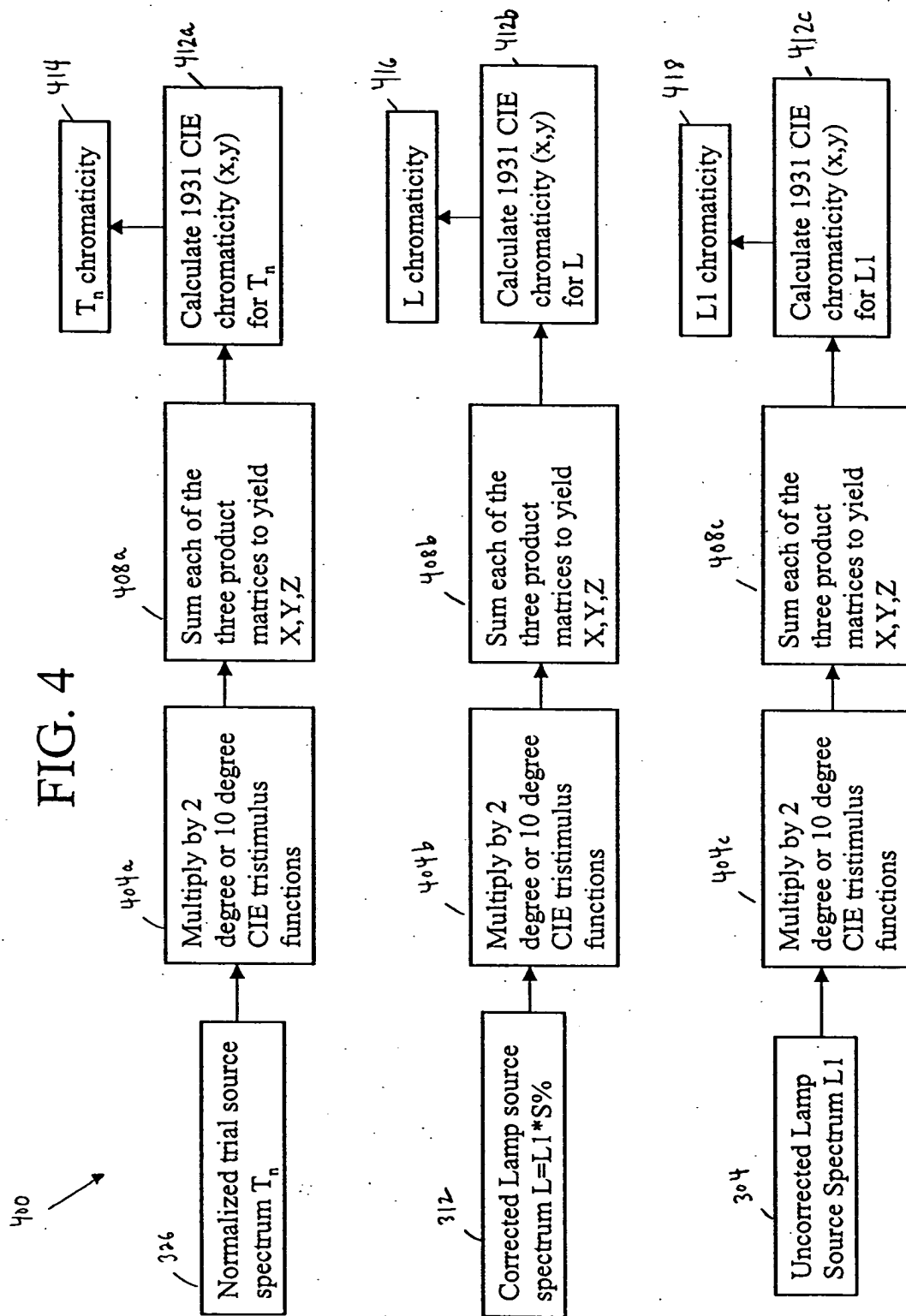
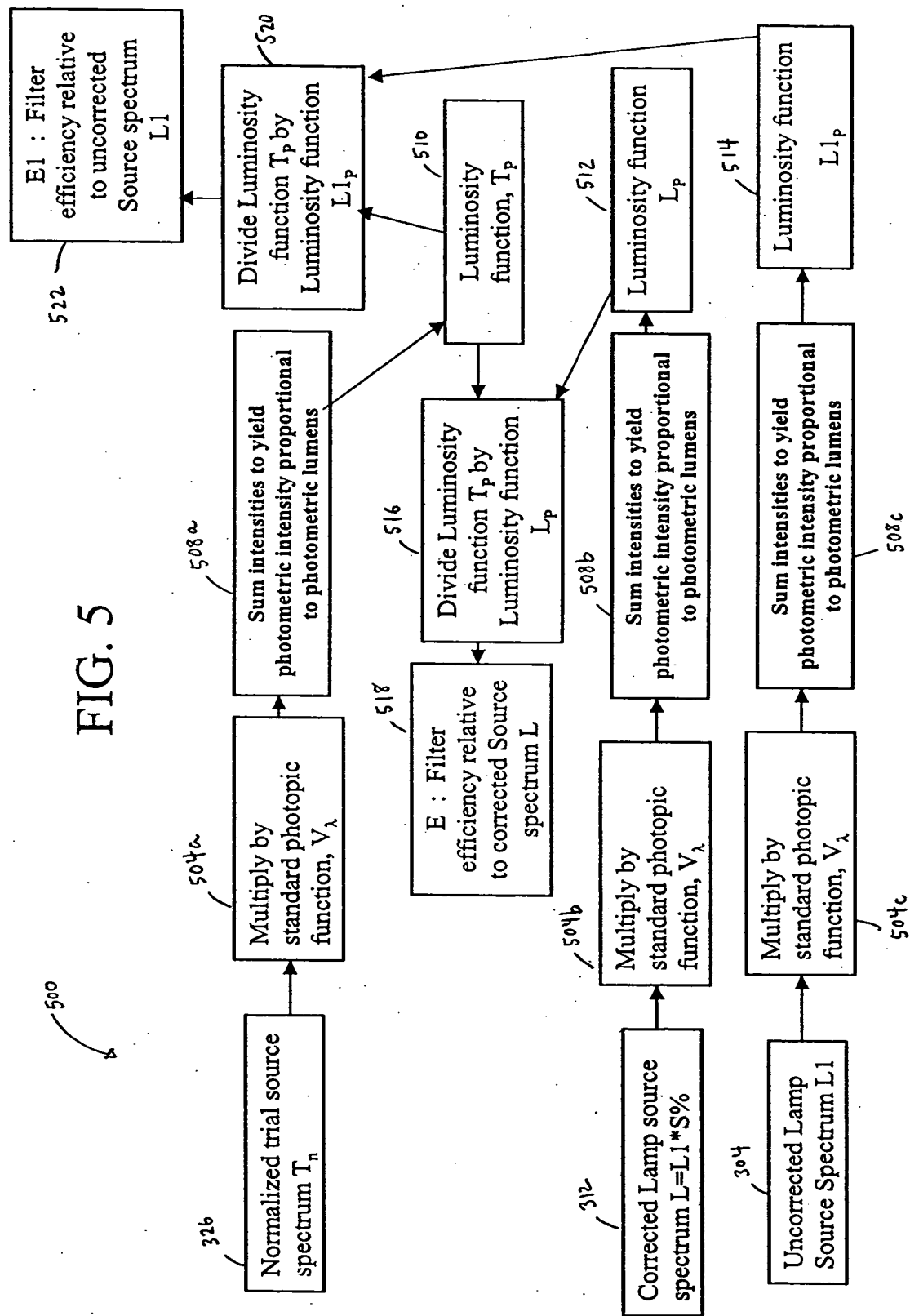


FIG. 5



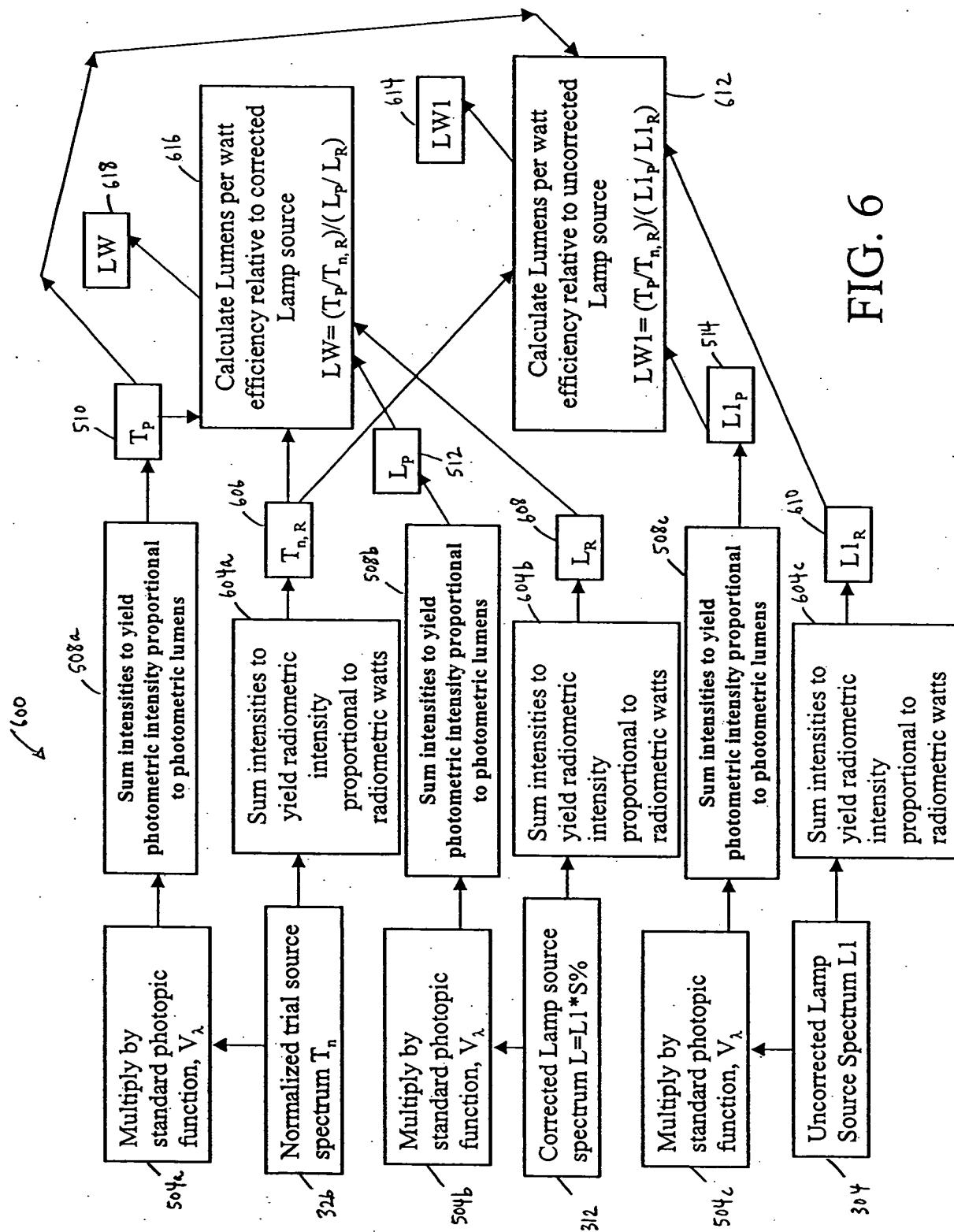


FIG. 6

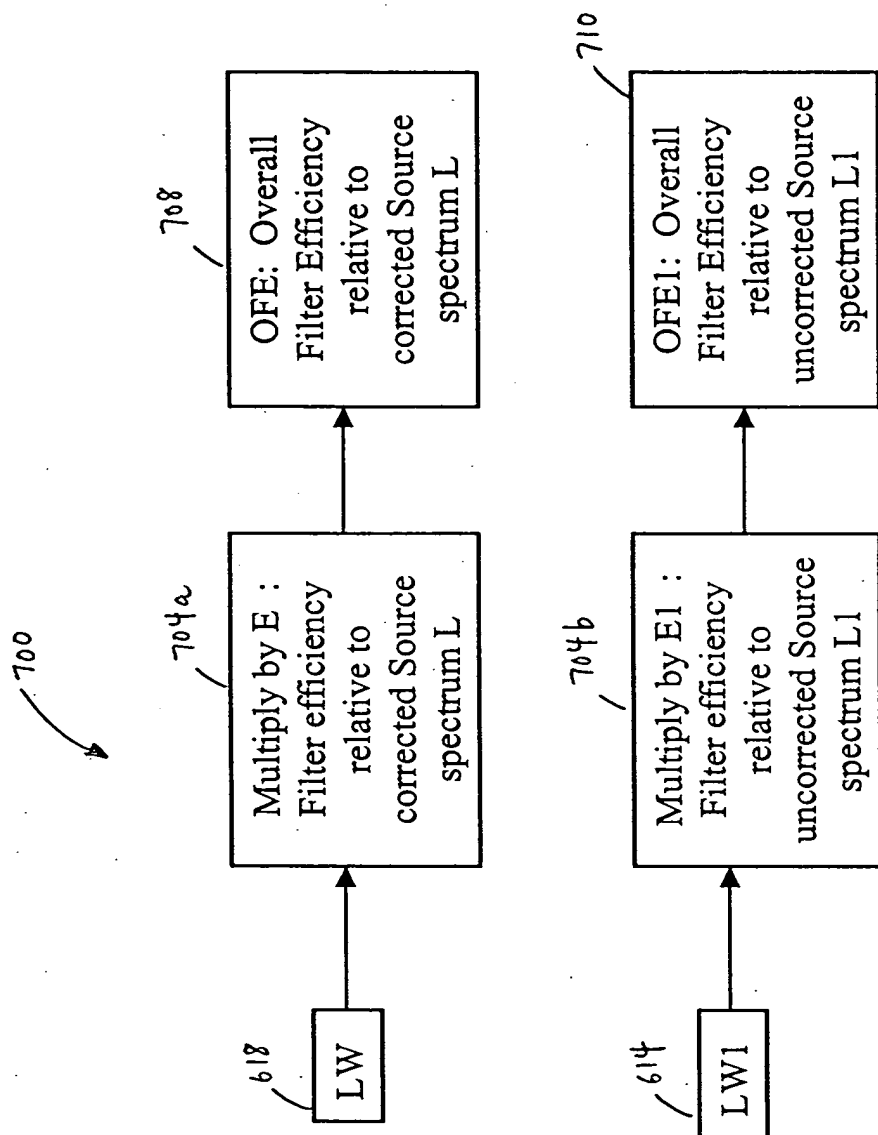


FIG. 7

800 ↗

804 ↘

WR= % lamp power through filter = $100 * (L1_R - T_{n,R}) / L1_R$

FIG. 8

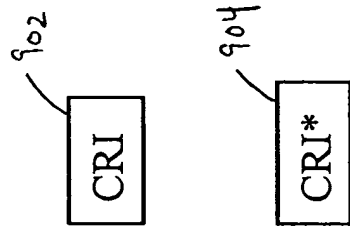


FIG. 9A

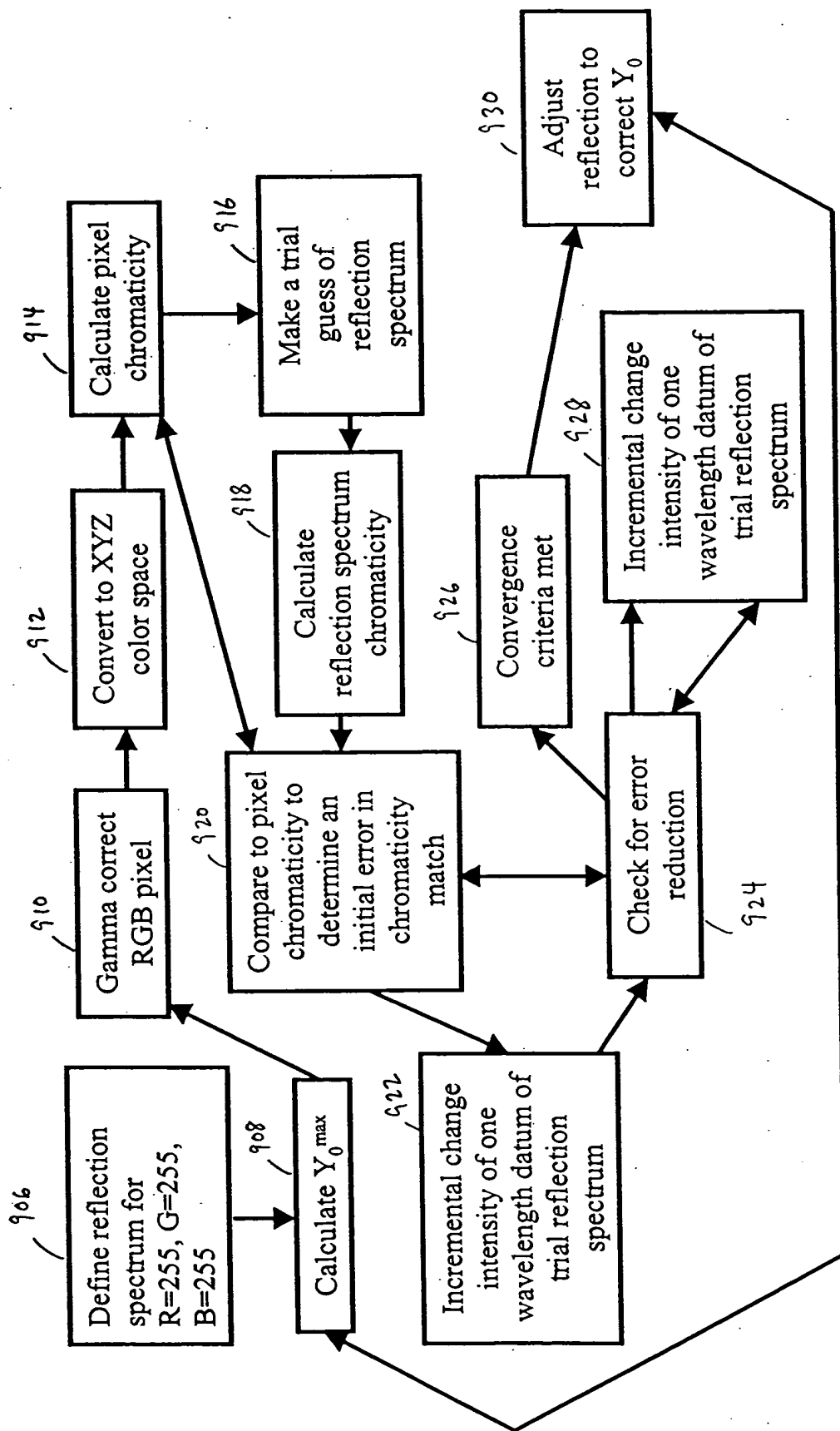


FIG. 9B

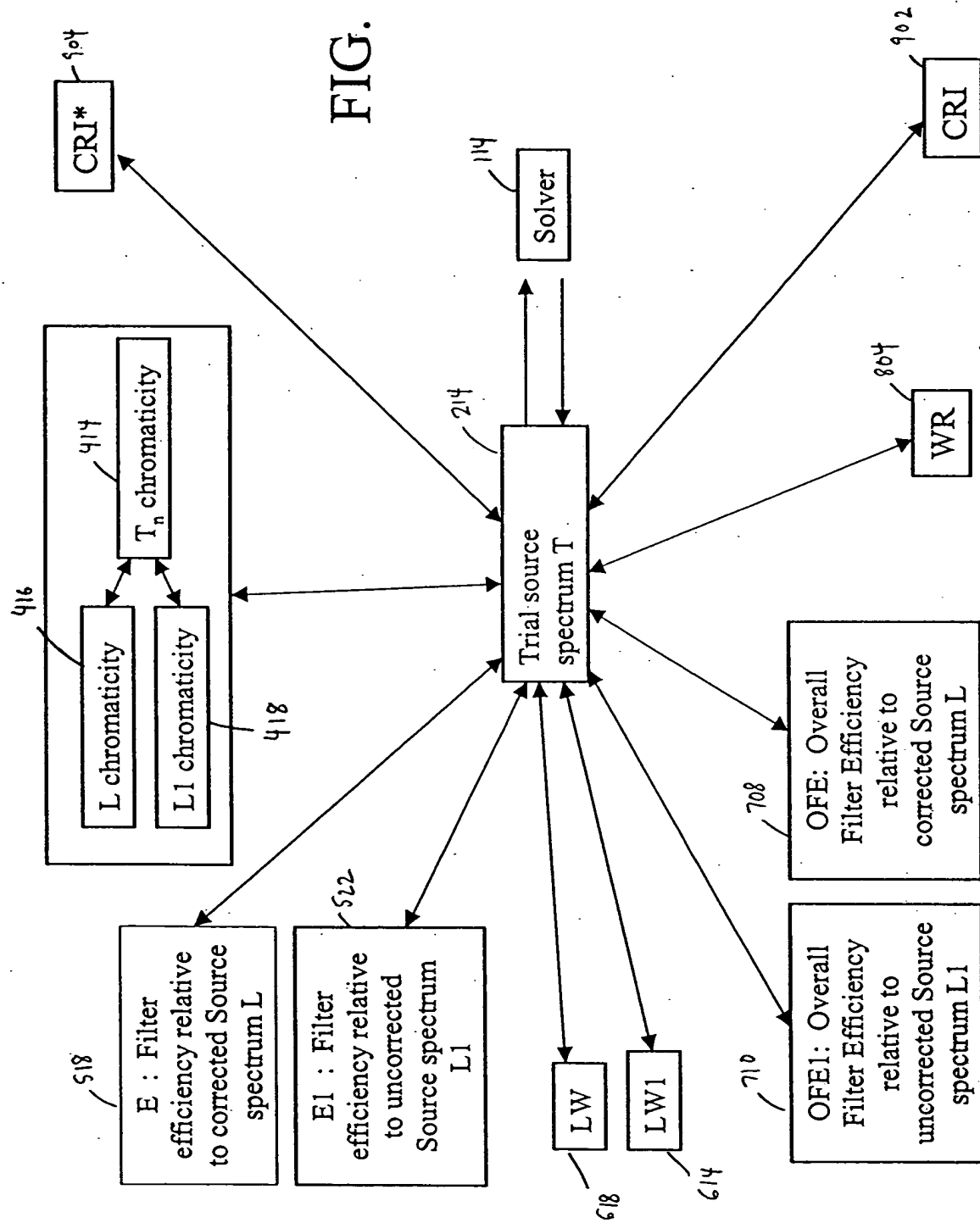


FIG. 10

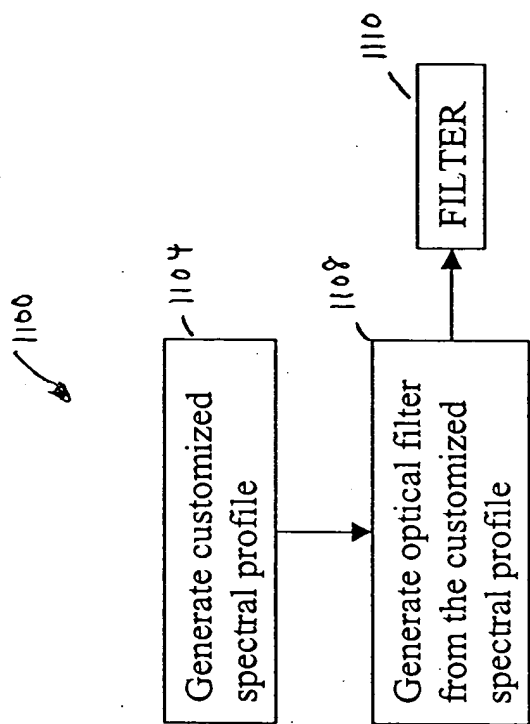


FIG. 11

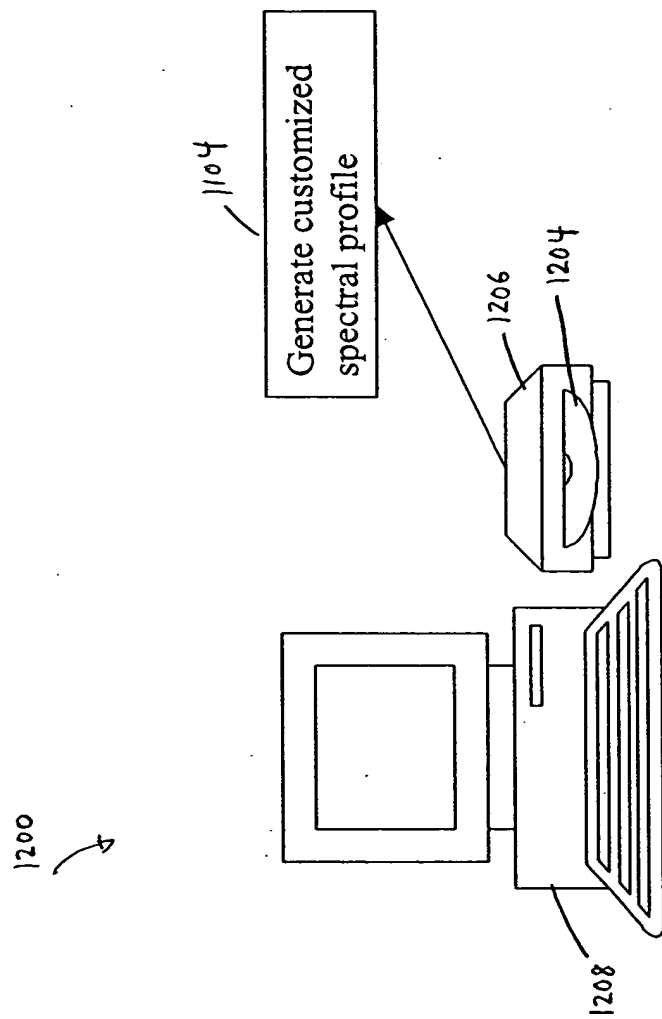


FIG. 12

Optimization toward high filter efficiency: Color temperature of filter matches color temperature of lamp, CRI-94.9, filter efficiency=97.7%, luminance/watt efficiency= 173%, overall efficiency= 169%, power reduction = 42.4%

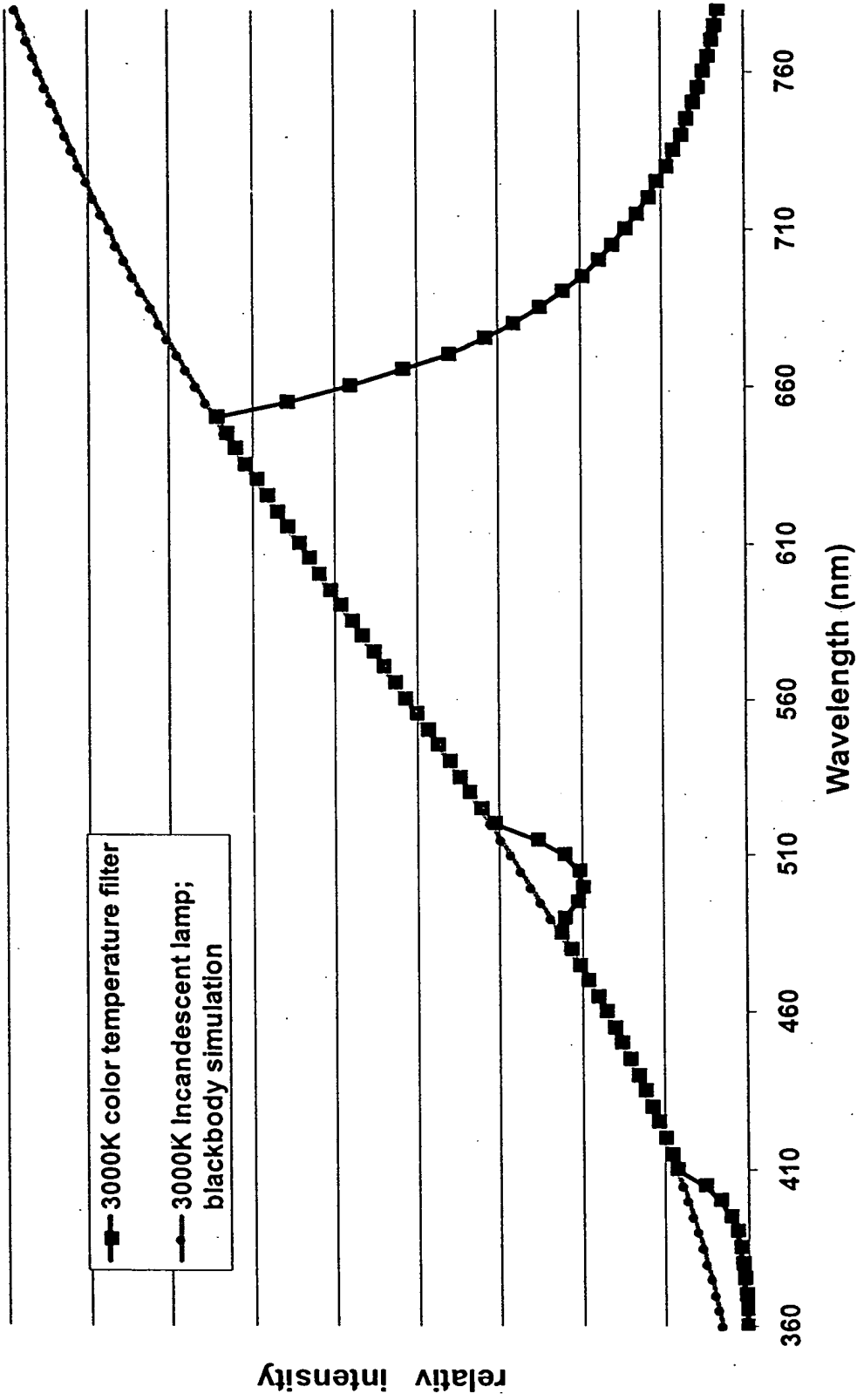


FIG. 13

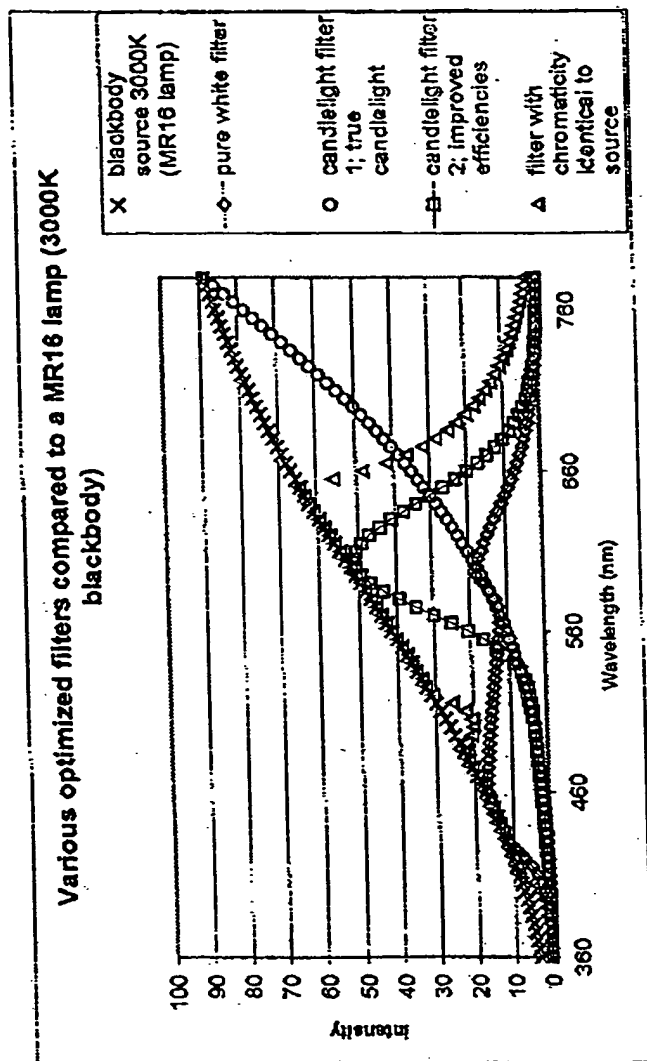


FIG. 14

Various optimized filters compared to incandescent lamp
(3000K blackbody simulation)

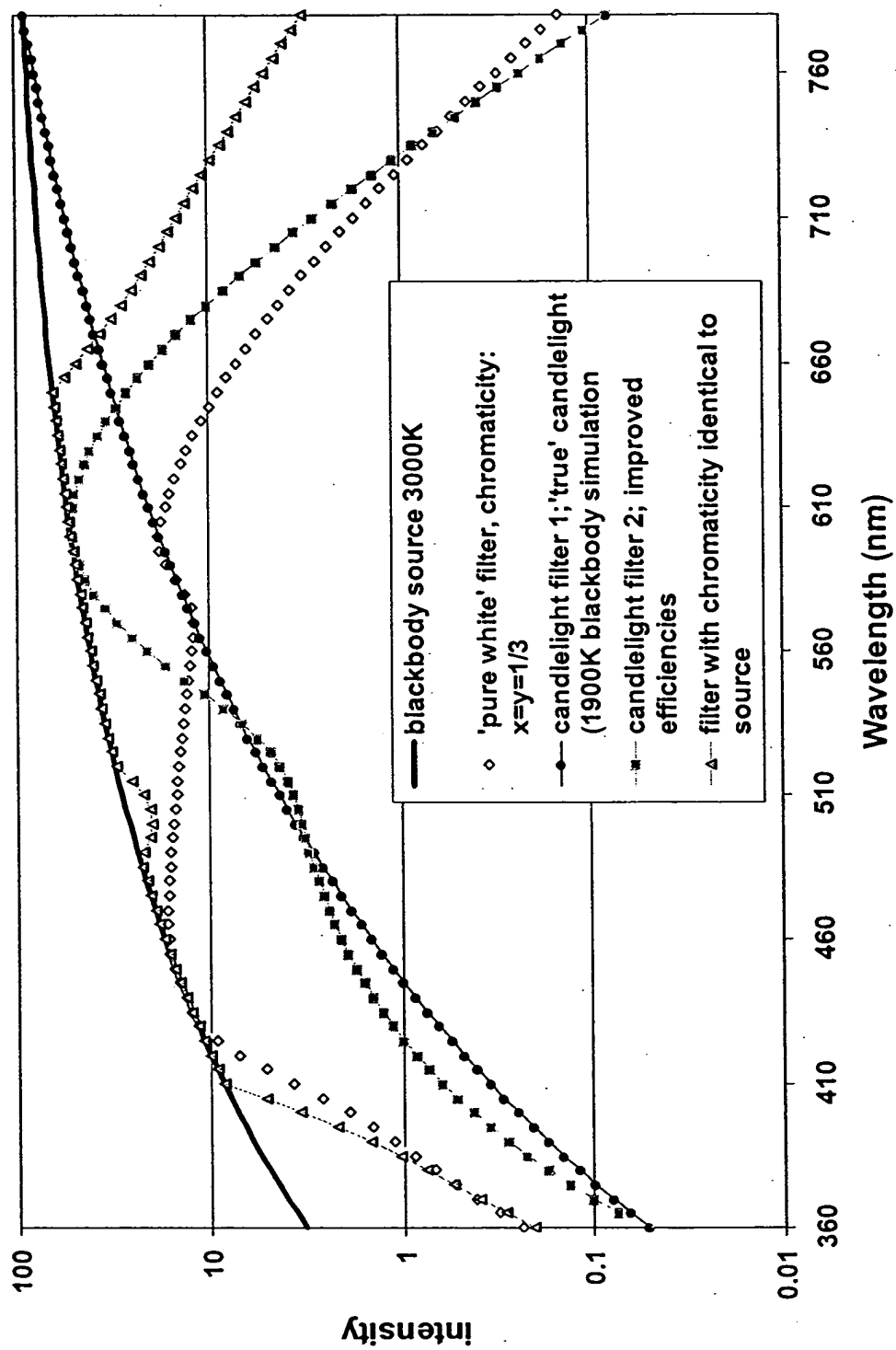


FIG. 15

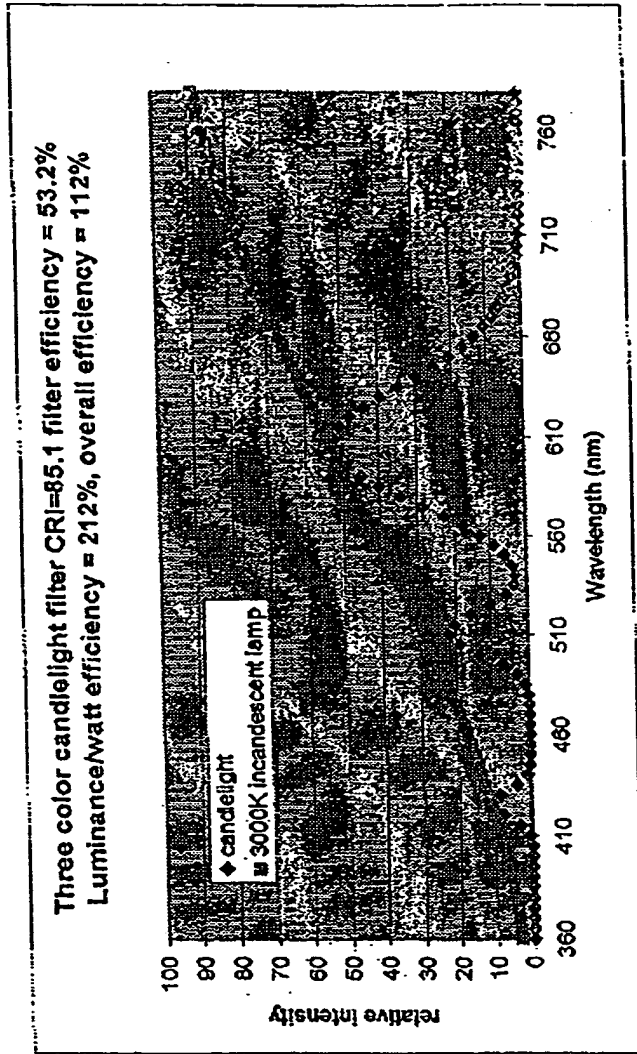


FIG. 16

Three color filter optimized to CRI=90.2, filter efficiency= 22.6%, luminance/watt
efficiency=224%, overall efficiency = 50.8%, 1931 CIE chromaticity of light (x=0.400, y=0.395)

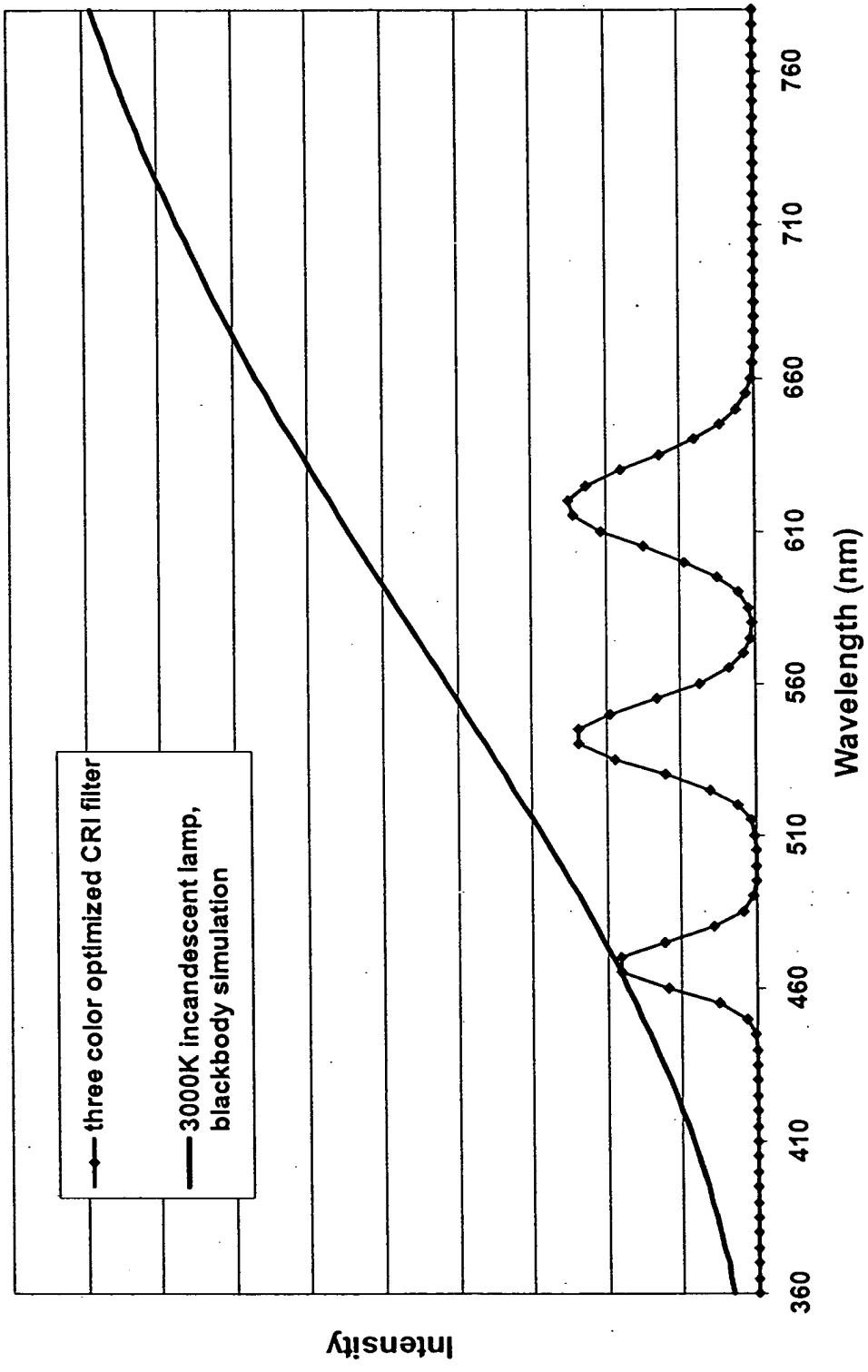


FIG. 17

Monet, *La maison vue du jardin aux Roses*, Musée Marmottan, Paris
 (left eye painting, 1925), three-Gaussian and discrete fits

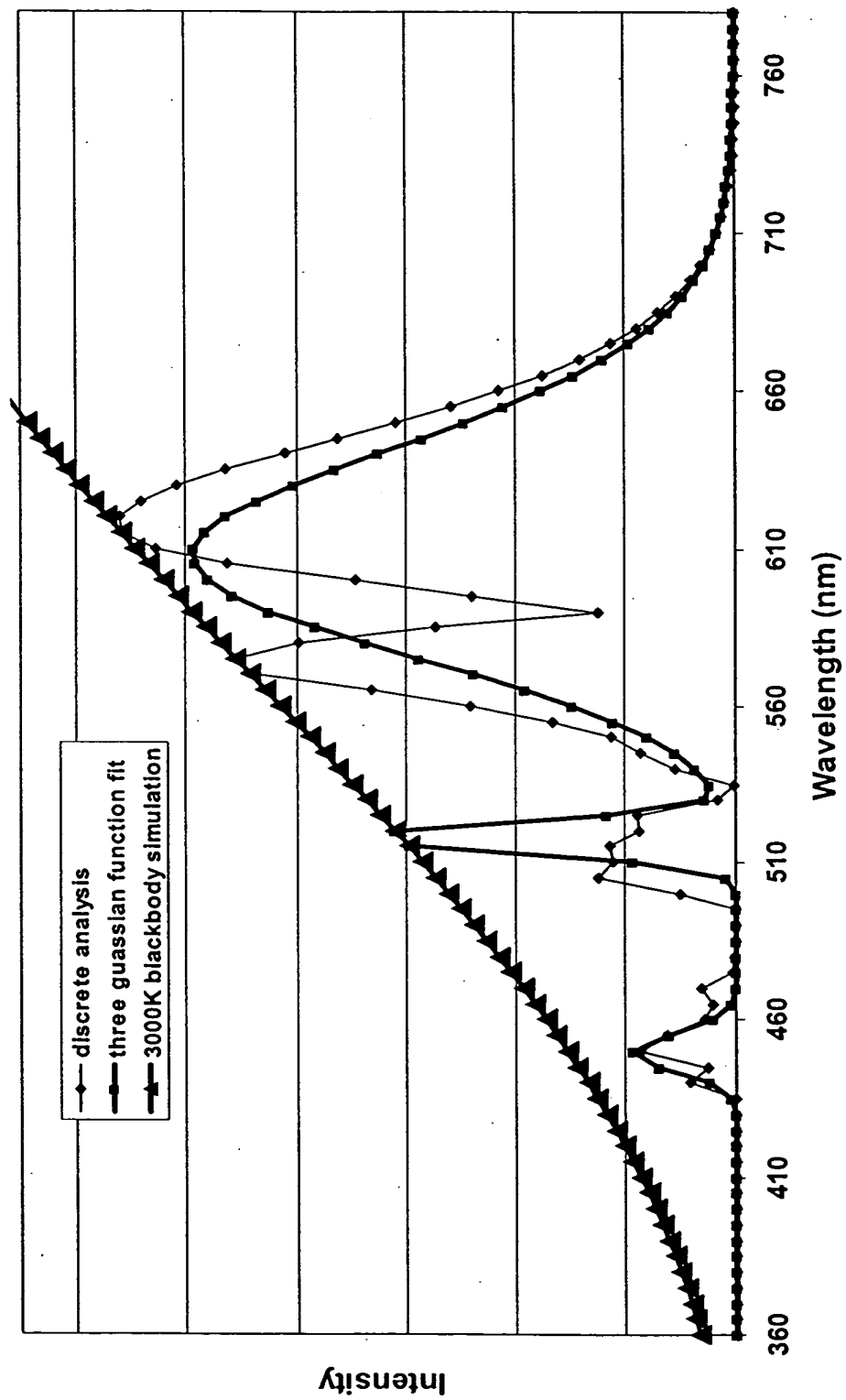


FIG. 18

Comparison of "candlelight" filters optimized
to two Monet Paintings

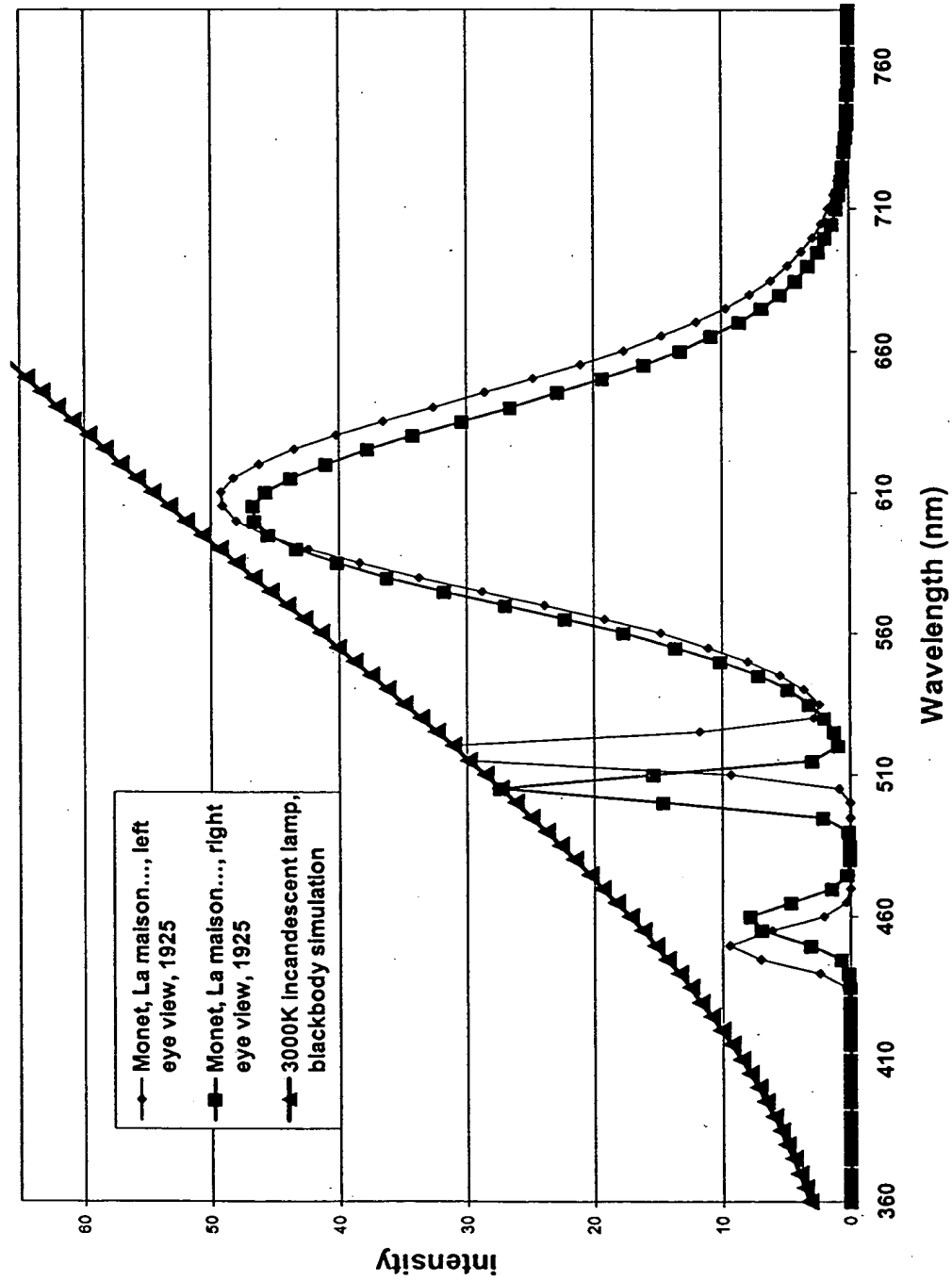


FIG. 19

Comparison of optimized filters for two Getty Museum drawings

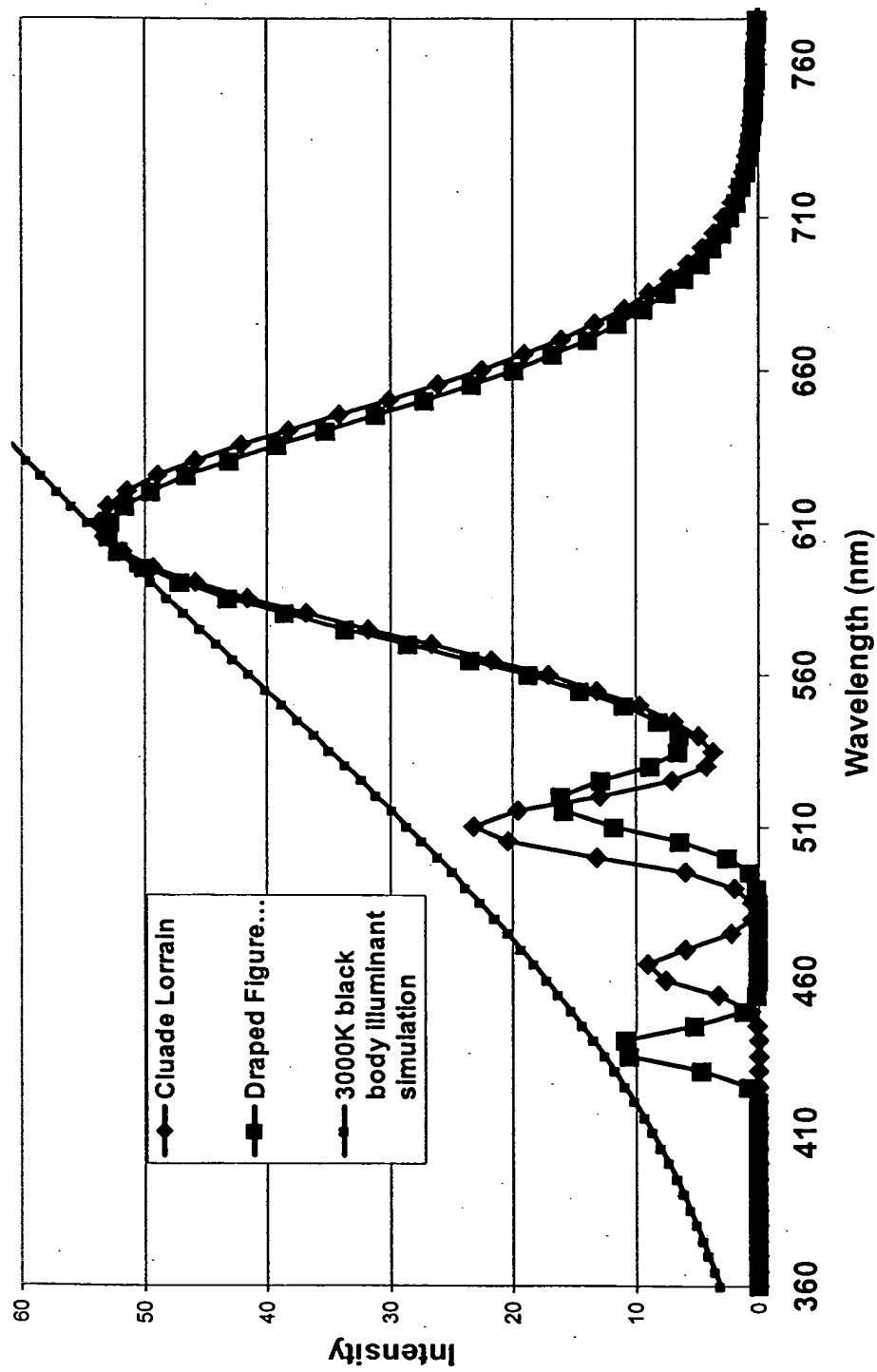


FIG. 20

Comparison of weighted and unweighted CRI optimizations of blue sky feature of Cluade Lorrain's "Coast Scene with a Fight on a Boat"

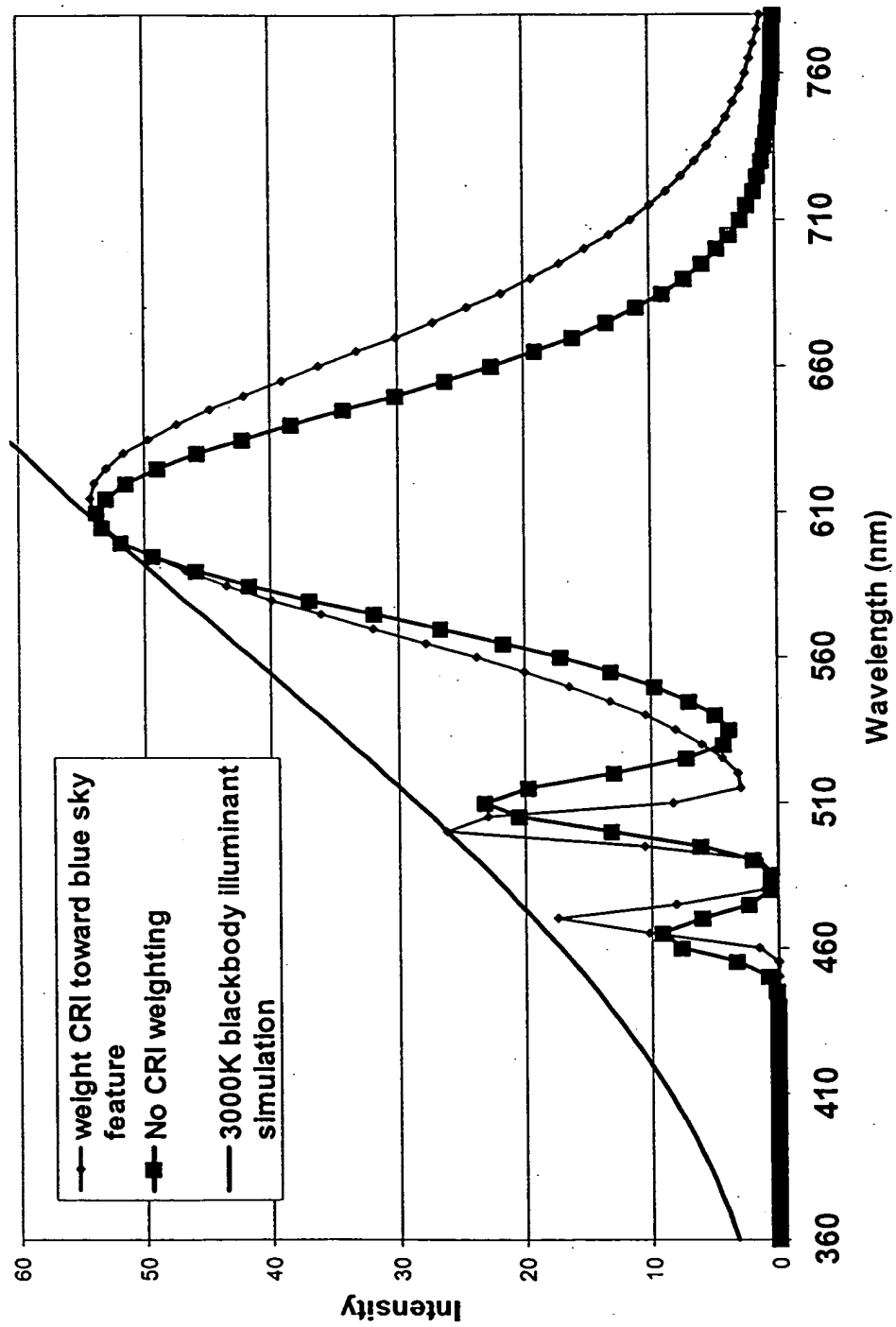


FIG. 21

Comparison of "candlelight" filters optimized
to three different works of art

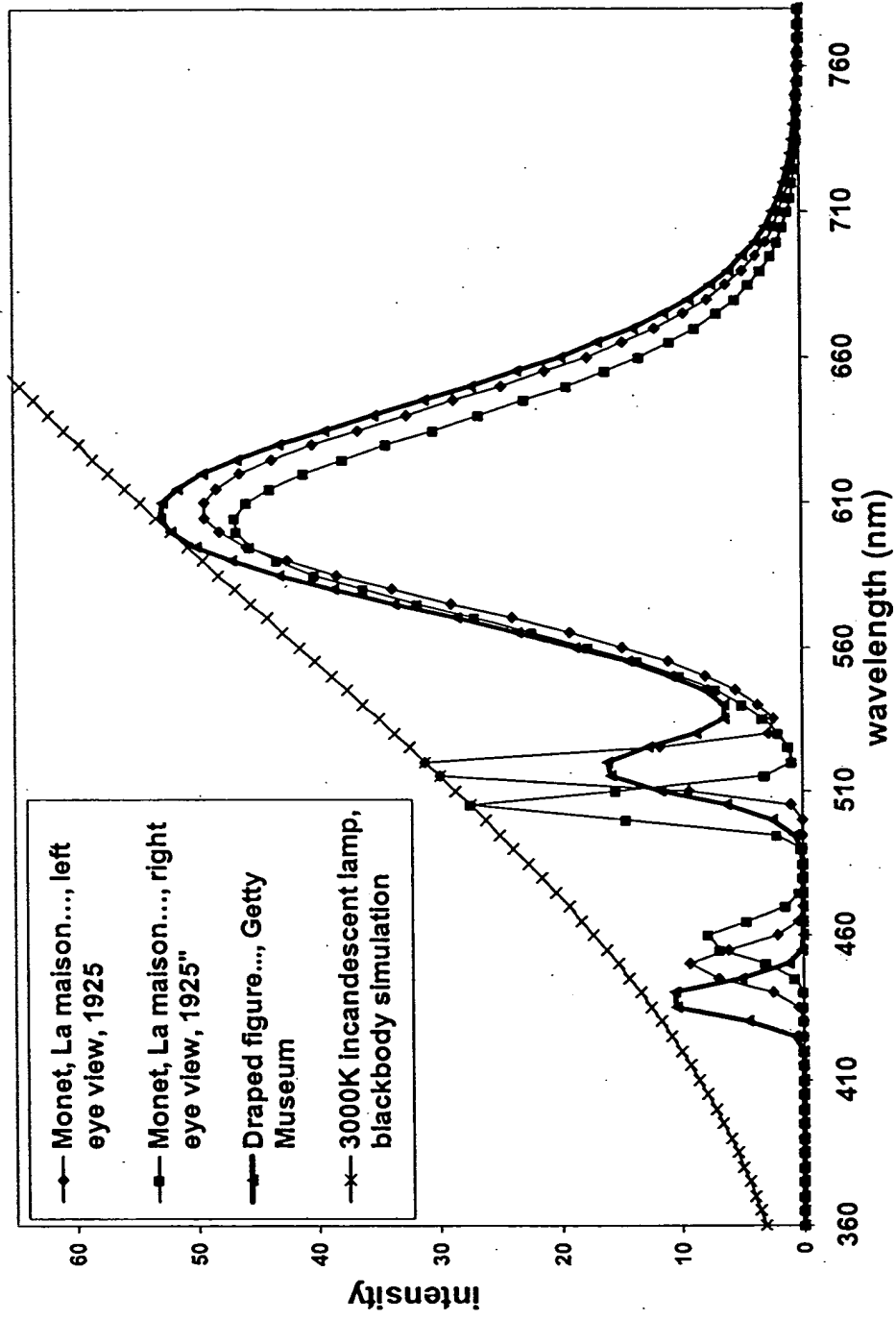


FIG. 22